1. **What I Learned**: RAID stands for Redundant Array of Independent Disks. Data is distributed across drives depending on the Raid Level. The standard raid levels are RAID 0, RAID 1, RAID 5, and RAID 6. There are also nested raid levels like RAID 1+0 commonly referred to as RAID 10. Stripping is the process of splitting up blocks of data that are then written across all the drives in the array. The reason for this is it offers great performance both in read and write operations. Mirroring data is stored twice. This allows for redundancy in the case one of the drives fails you have a separate non-corrupt copy you can continue from. Raid 0 offers no protection for data, its main benefit is to speed of read and write operations. Concatenated is a collection of disks that appear as one volume. It is also referred to as a JBOD or Just a Bunch of Disks. It is not faster than a single disk and offers no data protection. Parity is a technique that checks whether data has been lost or written over when it is moved from one place in storage to another. The cost of hardware to create a RAID is relatively inexpensive compared to the data loss due to hardware failure or poor planning.
2. **Questions** *Answer the questions in Step 3. Include the original question (copy/paste), followed by your answer. Please document all research and include the sources on the last page and title it 'Sources'. (APA style is not required)*

What are the different types of RAIDs discussed in the lesson?

RAID 0 – Striping with Parity

Raid 1 – Mirroring

RAID 5 – Striping with Parity

RAID 6 - Striping with Double-Parity

RAID 10 – Combines mirroring and striping.

Which is considered to be the most used one in an enterprise environment?

In today's enterprise environments Raid 10 then Raid 6 are the most popular due to their reliability and the extra level of performance.

Does a RAID 0 protect against data loss? (No backup of the RAID exists.)

No, Raid 0 offers no protection for data, its main benefit is to speed of read and write operations.

What is concatenated?

It is a collection of disks that appear as one volume. It is also referred to as a JBOD or Just a Bunch of Disks. It is not faster than a single disk and offers no data protection.

What is parity?

Parity is a technique that checks whether data has been lost or written over when it is moved from one place in storage to another.

When should you use a RAID 0 vs. a RAID 1? Why?

You should use a RAID 0 when Preformance is your key metric as Raid 0 offers Double the read and write speeds of other raids. When data retention is the most important thing use a RAID 1 as this makes a duplicate set of data on both disks allowing for easy recovery is one drive was to fail.

What did you learn about hardware costs vs. business costs?

The cost of hardware to create a RAID is relatively inexpensive compared to the data loss due to hardware failure or poor planning. When considering cost being reactive is much more costly than being proactive.

Sources:

Question 2: https://www.arcserve.com/blog/understanding-raid-performance-various-levels